

Sanders Media 12/7

The printer that wraps it all up.



It's like having the dot matrix, daisy wheel, ink jet, and Selectric ball — all wrapped up together.

Sanders has incorporated the best features of all these printing techniques into a single package — the Media 12/7 printer. This is the printer that varies its speed according to the quality of type you want. At its fastest speed, with a single pass of the print head, the characters look similar to those of a typical wire matrix printer — but the quality is better because the dots are more closely spaced.

Typefaces are also produced with two or more passes of the print head for each line of characters. As the number of passes per line increases, the shape and quality of the characters will improve, and at the same time, the printing speed may decrease. Single pass typefaces are ideal for producing drafts at high speed, and four pass fonts produce fully-formed characters of typewriter quality.

The Infinite Matrix Principle: precise control of dot placement.

The Infinite Matrix Principle is a unique, patented devel-

opment by Sanders Technology. Unlike other matrix printers, which are limited to fixed matrices, the Sanders Media 12/7 printer has the ability to place a 13-mil dot anywhere on a page to within 1-mil accuracy. In the vertical direction, dots can be placed as close as 3.5-mils apart, and horizontally, as close as 8-mils apart. As a result, dots can overlap 75% vertically and nearly 50% horizontally. With this high degree of control over dot positioning, the printer can produce characters with exceptionally smooth curves.

Intermix typefaces without skipping a beat.

Under software control, the Media 12/7, with its built-in Zilog Z80 microprocessor, can intermix a variety of typefaces. Changes in fonts can be accomplished by a simple operator command — and there are no balls or daisy wheels to replace! As many as 11 typefaces can be stored in ROM within the printer.

Special character sets can be supplied, such as OCR, scientific, and foreign languages — including selected ideographic languages. Capable of producing signatures in anyone's handwriting, the Media 12/7 can also generate proportionally-spaced characters for printed documents and reports.

Built-in intelligence — for maximum versatility.

The Zilog Z80, among the most advanced microprocessor controllers, is incorporated into every Media 12/7 printer. The novel architecture of this microprocessor, and its special software, are engineered to (1) assure accurate registration, (2) provide storage for a variety of typefaces, and (3) make the printer easy to operate with simple command sequences.

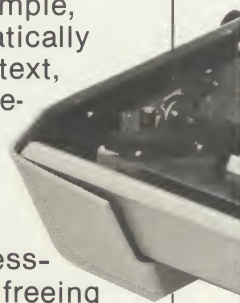
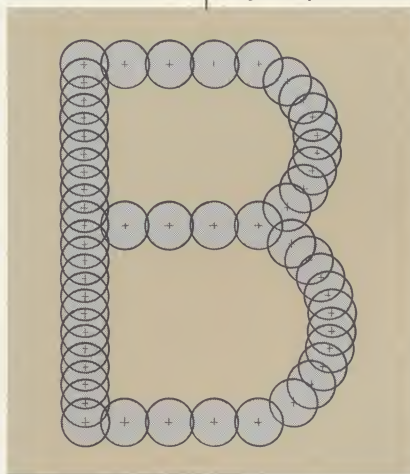
Simple control sequences.

A few simple commands will control a wide variety of text handling functions. The highly sophisticated software,

resident within the printer, performs all the calculations required to manipulate text without operator intervention. The printer will, for example, automatically justify text, which relieves the

users' software of many subroutines needed in word processing systems, thereby freeing valuable computer time.

The following features are easily controlled by the operator.



Media 12/7 control functions.

Text format.

Ragged right.
Justification, with
or without letter
spacing.
Flush right.
Centered text.

Parameter controls.

Typeface selection.
Form selection.
Line length.
Left margin.
Indentation.

Ribbon usage.
Insert sequence.
Insert character.
Set/clear underline.
Form length.
Word space.
Letter space.
Line height.
Repeat character.
Draft mode.

Print positioning.

Line feed.
Negative line feed.
Half line feed.
Negative half line
feed.

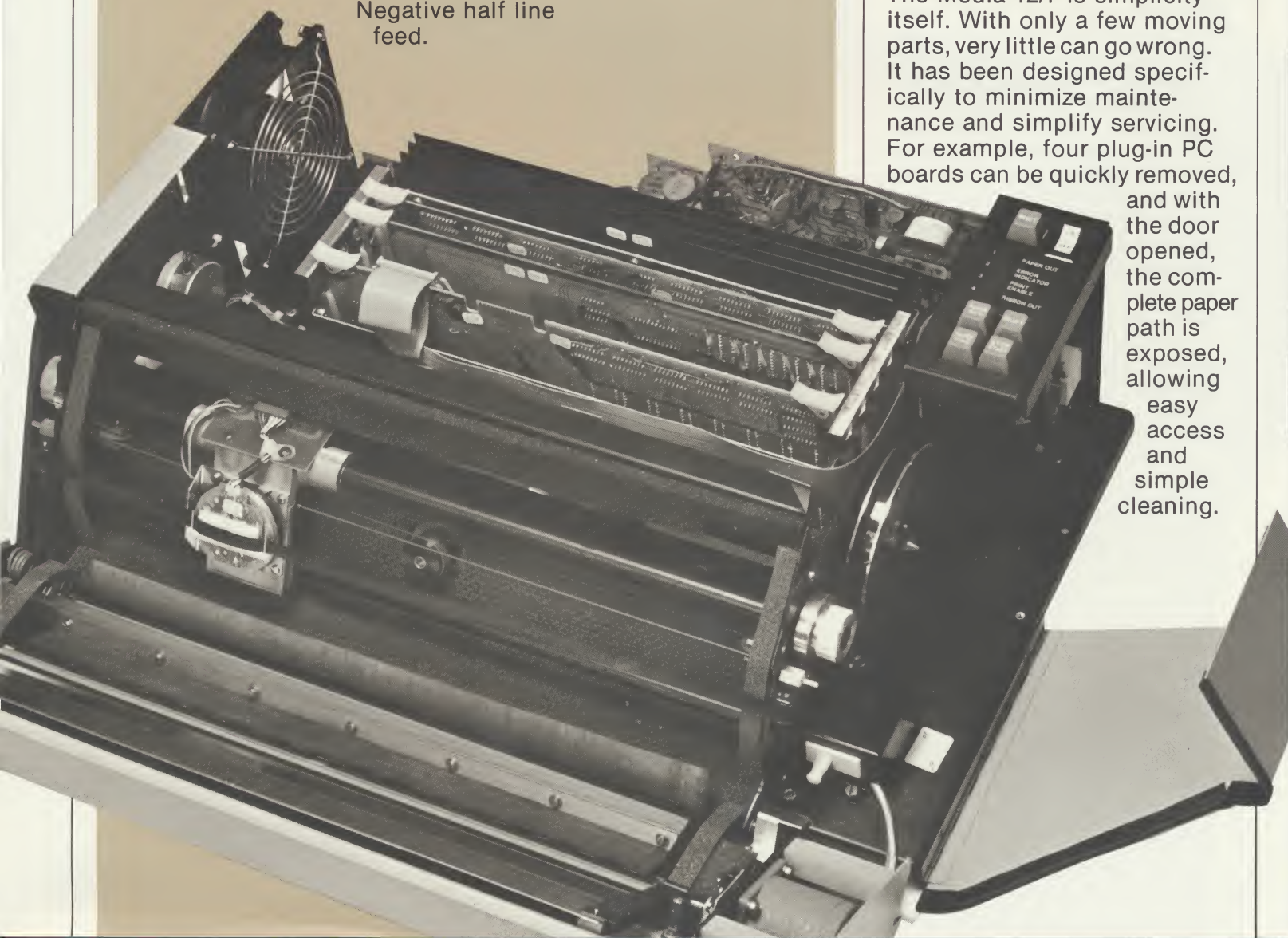
Form feed.
Absolute horizontal
tab (for
proportionally
spaced characters).
Absolute vertical
tab.
Forced
escapement.
Forced leading.

Almost no operator adjustments.

The only operator adjustment that may be needed is a very simple one — to adjust the head-to-platen distance for different paper thicknesses. And all that requires is to rotate a detented knob.

Beautifully simple to maintain.

The Media 12/7 is simplicity itself. With only a few moving parts, very little can go wrong. It has been designed specifically to minimize maintenance and simplify servicing. For example, four plug-in PC boards can be quickly removed, and with the door opened, the complete paper path is exposed, allowing easy access and simple cleaning.



SPECS

Media 12/7

PRINTING METHOD

Strike-on image. Printed serially in bidirectional mode.

PRINT SPEEDS

Typical 1-pass fonts: 120 to 216 cps.
Typical 4-pass fonts: 30 to 50 cps.

TYPEFACES

Multiple typefaces available in a variety of styles and sizes. Ability to mix typefaces on the base line. One fully formed typeface in 10 or 12 pitch and one high speed matrix face are included in standard model. Up to 11 typefaces may be stored internally in ROM.

HORIZONTAL FORMAT

13.2 inch print line in increments of .001 inch.

VERTICAL FORMAT

Spacing in increments of .0035 inch. Proper (default) line spacing is set by the typefaces used. Paper can be moved bidirectionally if required.

FORMS

Cut sheets or continuous rolls of ordinary plain paper up to 14 inches wide ranging from newsprint to 80 pound text stock.

HEAD TO PLATEN SPACING

Adjustable from 10 to 30 mils.

PAPER FEED

Pressure friction roller.

RIBBON

Standard multi-strike carbon 5/16 inch x 900 feet, reel to reel, in any single color.

PUSHBUTTON OPERATOR CONTROLS

Power On/Off.
Start/Stop Print.
Reset.
Paper Forward.
Paper Reverse.
Draft.

INDICATOR LIGHTS

Ribbon out.
Error indicator.
Print enable.
Paper out.

PROGRAMMABLE FORMAT CONTROLS

See control functions listing on page 3.

INPUT CODE

128 character
ASCII.

PHYSICAL CHARACTERISTICS

Weight: 42 pounds.
Width: 22.75 inches.
Height: 8 inches.
Depth: 16.25 inches.
(Measurements include covers with power supply enclosed.)

ENVIRONMENT

Temperature, operating:
50 to 95°F/10 to 35°C.
Temperature, storage:
- 40 to + 170°F/ - 40 to + 76°C.
Humidity: 10 to 90% RH.

OPTIONS

Roll paper feed rack.
Automatic single-sheet feed.
Tractor feed.
220 VAC, 50 Hz electrical configuration.



INTERFACE

Serial: EIA RS-232C compatible.
Parallel: Centronics compatible.

POWER REQUIREMENTS

Nominal 115 VAC $\pm$ 10%, 60 Hz, 320 Watts (Peak).

Specifications subject to change without notice.



Sanders Technology

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ORIGINAL PRINT SAMPLE
MEDIA 12/7 PRINTER
Sanders Technology Systems, Inc.
Columbia Drive
Amherst, New Hampshire
(603) 882-1000

Correspondence quality output can be generated by the MEDIA 12/7 in the Messenger typeface. This Messenger 12 is constructed using four passes of the print head per line. Messenger is very applicable to word processing or wherever quality correspondence printing is required. It is available in both 10 and 12 pitch as well as an international set which allows printing in European languages including French, Spanish and German. Messenger International is an additional font set which when added to the Messenger yields a multi-language capability for a small incremental cost.

The standard printer will HAVE UP TO 11 TYPEFACES WHICH CAN BE COMBINED WITHIN THE SAME DOCUMENT AND EVEN WITHIN THE SAME LINE. THE "4 PASS" QUALITY IS PRODUCED BY FOUR HORIZONTAL PASSES OF A 7 PIN PRINT HEAD WITH SLIGHT VERTICAL MOTION OF THE PAPER BETWEEN PASSES. The characters are formed with 12 mil dots placed to 1 mil accuracy *horizontally* and 3.5 mils vertically. Most knowledgeable observers agree our print quality is equal to or slightly better than the IBM ink jet and standard electric typewriters.

THIS UTILITY QUALITY (1 PASS) TYPEFACE CALLED MEDIA MAX 12 IS USEFUL IN MANY APPLICATIONS SUCH AS CORRESPONDENCE DRAFTS AND TELEPRINTING. ONE PASS TYPEFACES ARE AVAILABLE IN A VARIETY OF DESIGNS. THE IMPROVED READABILITY OF THE MEDIA MAX TYPEFACES OFFER A DISTINCT ADVANTAGE OVER THE TYPICAL 5x7 AND 7x9 MATRIX PRINTERS. MEDIA MAX OFFERS MORE READABLE ONE PASS OUTPUT WITH NO REDUCTION IN PRINTING SPEED. EACH OF THE MEDIA MAX TYPEFACES IS PRODUCED BI-DIRECTIONALLY IN ONE HORIZONTAL PASS OF THE PRINT HEAD PER LINE. THESE CHARACTERS ARE 12 PITCH TYPE AND ARE BEING PRINTED AT 144 CHARACTERS PER SECOND ON THE PRODUCTION PRINTER. THIS PRINT SIZE CAN BE USED FOR PROOFING OUTPUT WHICH WILL BE PRINTED WITH THE MESSENGER 12 TYPEFACE ABOVE. USING THE DRAFT BUTTON ON THE MEDIA 12/7 THE OPERATOR CAN PRODUCE A DRAFT COPY, PROOF IT FOR FORMAT AS WELL AS CONTENT, AND THEN PRINT OUT THE FINAL COPY IN MESSENGER 12.

ANOTHER MEMBER OF THE MEDIA MAX FAMILY, MEDIA MAX 16.5, IS USEFUL WHERE BOTH HIGH SPEED AND HIGH READABILITY ARE NEEDED. THIS QUALITY IS BETTER THAN MOST MATRIX PRINTERS USED IN SMALL COMPUTER SYSTEMS AND IS STILL BEING PRINTED WITH ONLY ONE PASS OF THE PRINT HEAD (198 CPS). USERS OF MATRIX PRINTERS WHO WANT SOME OR ALL OF THEIR PRINT-OUTS IN BETTER QUALITY ARE EXPECTED TO FAVOR OUR PRINTER OVER A NORMAL MATRIX PRINTER. WORD PROCESSING USERS WILL USE THIS QUALITY FOR QUICK PRINT-OUTS OF DRAFT QUALITY.

High quality text output can be produced using one of the members of the Helvesan family. This paragraph is set in 8 point Helvesan Regular. Helvesan is a proportionally spaced, sans serif typeface which the MEDIA 12/7 prints in four passes of the print head per line. Helvesan is recommended for high quality printing of business documents such as reports and proposals. The "infinite matrix principle" embodied in the MEDIA 12/7 allows this typesetting quality output. Typefaces may be instantaneously switched by the MEDIA 12/7 firmware allowing proportional text for the body of text and fixed pitch text for tables.

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DOMESTIC FONTS

MESSENGER 10/4 #630205, 4 pass, 10 pitch, 3 chips

```
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
a b c d e f g h i j k l m n o p q r s t u v w x y z
0 1 2 3 4 5 6 7 8 9 ! " # $ % & ' ( ) * + , - . / :
; < = > ? @ [ \ ] ^ _ ' { | } ~
```

MESSENGER 10/8 #630203, 8 pass, 10 pitch, 3 chips

```
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
a b c d e f g h i j k l m n o p q r s t u v w x y z
0 1 2 3 4 5 6 7 8 9 ! " # $ % & ' ( ) * + , - . / :
; < = > ? @ [ \ ] ^ _ ' { | } ~
```

MESSENGER 12 #630149, 4 pass, 12 pitch, 3 chips

```
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
a b c d e f g h i j k l m n o p q r s t u v w x y z
0 1 2 3 4 5 6 7 8 9 ! " # $ % & ' ( ) * + , - . / :
; < = > ? @ [ \ ] ^ _ ` { | } ~
```

MEDIA MAX 10 #630152, 1 pass, 10 pitch, 1 chip

```
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
0 1 2 3 4 5 6 7 8 9 ! " # $ % & ' ( ) * + , - . / :
; < = > ? @ [ \ ] ^ _ ` { | } ~
```

MEDIA MAX 12 #630151, 1 pass, 12 pitch, 1 chip

```
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
0 1 2 3 4 5 6 7 8 9 ! " # $ % & ' ( ) * + , - . / :
; < = > ? @ [ \ ] ^ _ ` { | } ~
```

MEDIA MAX 16.5 #630150, 1 pass, 16.5 pitch, 1 chip

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
0 1 2 3 4 5 6 7 8 9 ! " # \$ % & ' () * + , - . / :
; < = > ? @ [\] ^ _ ` { | } ~

MEDIA MAX 18 #630153, 1 pass, 18 pitch, 1 chip

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
0 1 2 3 4 5 6 7 8 9 ! " # \$ % & ' () * + , - . / :
; < = > ? @ [\] ^ _ ` { | } ~

HELVESAN 8 REGULAR #630154, 4 pass, Proportional, 2 chips

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
a b c d e f g h i j k l m n o p q r s t u v w x y z
0 1 2 3 4 5 6 7 8 9 ! " # \$ % & ' () * + , - . / :
; < = > ? @ [\] ^ _ ` { | } ~

HELVESAN 8 REGULAR DRAFT #630155, 1 pass, Proportional, 1 chip

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
A B C D E F G H I J K I M N O P Q R S T U V W X Y Z
0 1 2 3 4 5 6 7 8 9 ! " # \$ % & ' () * + , - . / :
; < = > ? @ [\] ^ _ ` { | } ~

HELVESAN 8 ITALIC #630159, 4 pass, Proportional, 2 chips

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
a b c d e f g h i j k l m n o p q r s t u v w x y z
0 1 2 3 4 5 6 7 8 9 ! " # \$ % & ' () * + , - . / :
; < = > ? @ [\] ^ _ ` { | } ~

HELVESAN 10 REGULAR #630239, 4 pass, 10 point proportional, 3 chips

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
a b c d e f g h i j k l m n o p q r s t u v w x y z
0 1 2 3 4 5 6 7 8 9 ! " # \$ % & ' () * + , - . / :
; < = > ? @ [\] ^ _ ` { | } ~

HELVESAN 10 REGULAR DRAFT #630249, 1 pass, 10 point proportional, 1 chip

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
0 1 2 3 4 5 6 7 8 9 ! " # \$ % & ' () * + , - . / :
; < = > ? @ [\] ^ _ ` { | } ~

PHAROAH 7 #630160, 2 pass, 7 point proportional, 2 chips

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
a b c d e f g h i j k l m n o p q r s t u v w x y z
0 1 2 3 4 5 6 7 8 9 ! " # \$ % & ' () * + , - . / :
; < = > ? @ []

PHAROAH 8 #630251, 4 pass, 8 point proportional, 3 chips

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
a b c d e f g h i j k l m n o p q r s t u v w x y z
0 1 2 3 4 5 6 7 8 9 ! " # \$ % & ' () * + , - . / :
; < = > ? @ [\] ^ _ ` { | } ~

PHAROAH 10 #630246, 4 pass, 10 point proportional, 3 chips

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
a b c d e f g h i j k l m n o p q r s t u v w x y z
0 1 2 3 4 5 6 7 8 9 ! " # \$ % & ' () * + , - . / :
; < = > ? @ [\] ^ _ ` { | } ~

GOTHIC 8 #630206, 4 pass, 12 pitch, 2 chips

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
a b c d e f g h i j k l m n o p q r s t u v w x y z
0 1 2 3 4 5 6 7 8 9 ! " # \$ % & ' () * + , - . / :
; < = > ? @ [\] ^ _ ` { | } ~

GOTHIC PROPORTIONAL #630177, 4 pass, 8 point proportional, 2 chips

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
a b c d e f g h i j k l m n o p q r s t u v w x y z
0 1 2 3 4 5 6 7 8 9 ! " # \$ % & ' () * + , - . / :
; < = > ? @ [\] ^ _ ` { | } ~

OCR-A #630166, 8 pass, 10 point, 3 chips

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
a b c d e f g h i j k l m n o p q r s t u v w x y z
0 1 2 3 4 5 6 7 8 9 ! " # \$ % & ' () * + , - . / :
; < = > ? @ [\] ^ _ ` { | } ~

OCR-B #630165, 8 pass, 8 point, 3 chips

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
a b c d e f g h i j k l m n o p q r s t u v w x y z
0 1 2 3 4 5 6 7 8 9 ! " # \$ % & ' () * + , - . / :
; < = > ? @ [\] ^ _ ` { | } ~

GREEK/MATH #630204, 8 pass, 10 pitch, 3 chips

A B Γ Δ Ε Ζ Η Θ Ι Κ Λ Μ Ν Ξ Ο Π Ρ Σ Τ Υ Φ Ψ Ω
α β γ δ ε ζ η θ ι κ λ μ ν ξ ο π ρ σ τ υ φ χ ψ ω
0 1 2 3 4 5 6 7 8 9 ! " # \$ % & ' () * + , - . / :
; < = > ? @ [\] ^ _ ` { | } ~

SCIENTIFIC-PI #630208, 8 pass, 10 pitch, 2 chips

‘ ’ ‚ “ ” « » ≤ ≥ ≈ ≅ ± † ≡ ≤ π ∠ ≠ ∴ ∪ ∩ ∇ → ∂ ⊥ ∝
‘ ’ ‚ “ ” « » ≤ ≥ ≈ ≅ ± † ≡ ≤ π ∠ ≠ ∴ ∪ ∩ ∇ → ∂ ⊥ ∝
0 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 = + × - ÷ { } =
+ × - ÷ □ ’ ’ † † 0 ((↓